

**REMARKS**

Claims 30-39 are all the claims pending in the application.

The Examiner now cites Komatsu et al. (Komatsu), and rejects:

- claims 30-39 under 35 U.S.C. §102(b) as being anticipated by Komatsu; and
- claims 31, 34 and 36 under 35 U.S.C. §103(a) as being unpatentable over Komatsu in view of previously-applied Sukegawa et al. (Sukegawa).

Applicant respectfully traverses the Examiner's prior art rejections as follows.

Applicant's claimed invention provides microcomputers (claims 30-35), flash memories (claims 37 and 38) and a method of storing a program into a flash memory (claim 39) comprising unique combinations of features and method steps, including *inter alia*: rewriting processing comprising erasure of a flag area, blank check of data area, and writing of data into the data area. As explained in Applicant's Amendment filed May 28, 2004, according to an aspect of Applicant's claimed invention, the flags include at least the rewriting start flag and the rewriting end flag, and also include flags allocated to keep a more detailed history so that, when a subsequent rewriting is performed after an interruption of an initial rewriting is detected, the subsequent rewriting can proceed beginning with a process following the process at which the initial rewriting has been interrupted (see, for example, Applicant's specification, page 15, lines 17-26). A non-limiting, exemplary implementation of Applicant's invention is illustrated in Applicant's Fig. 9 which shows flags set for at least the following stage (or steps) of the rewriting processing: (1) "erasure of the rewriting area" stage, marked by the erasure of the flag area and/or setting of the erasure flag; (2) "blank check of the data area" stage, marked by setting

RESPONSE UNDER 37 C.F.R. § 1.116

Appln No.: 09/401,293

of a blank error flag and/or blank check end flag; and (3) “writing” stage, marked by writing an end flag and/or a verify error flag (see Applicant’s specification at pages 16 through 18).

Komatsu discloses a method and apparatus for conventional flash memories where “it is impossible to write information over existing information” and which can tolerate only a limited number of erasures. In particular, Komatsu addresses, *inter alia*, the problem of a decrease in the total available storage area in the flash memory, due to the deterioration of storage areas which experience multiple erasures, by averaging the number of erasures all over the memory area. (See Id., col. 1, line 24 through col. 2, line 57). Also, Komatsu intends to provide “an efficient method of writing, erasing, and controlling a [flash] memory” (see Id., col. 2, lines 1-5). In contradistinction to Applicant’s claimed invention, Komatsu does not disclose, teach, or even remotely suggests, keeping a more detailed history of rewriting processing so that, when a subsequent rewriting is performed after an interruption of an initial rewriting is detected, the subsequent rewriting can proceed beginning with a process following the process at which the initial rewriting has been interrupted.

That is, Komatsu discloses a method and apparatus where each sector of the flash memory stores management information including the following flags: “(1) Defect flag” and “(2) Erase flag”, and where, following the last sector, there are stored the following flags: “(10) Start Erasing”, “(11) End erasing”, “(12) All Erase Target” and “(13) Free Block”. (See Id., col. 4, lines 21-63. While Komatsu provides for storage of numerous flags associated with the flash memory, nowhere does Komatsu disclose, teach or suggest performing determination of completion of a plurality of stages of rewriting processing, let alone recording results of the

RESPONSE UNDER 37 C.F.R. § 1.116

Appln No.: 09/401,293

determination of completion of each stage into the flag areas, as recited in Applicant's independent claims 30, 32, 33, 35 and 37-39. Likewise, as noted in Applicant's Amendment filed May 28, 2004, Sukegawa does not supply at least the above-noted deficiency of the prior art (including the deficiency of the newly-applied Komatsu).

Therefore, Applicant's independent claims 30, 32, 33, 35 and 37-39, as well as the dependent claims 31, 34 and 36 (which incorporate all the novel and unobvious features of their respective base claims) are not anticipated by Komatsu, and would not have been obvious from any reasonable combination of Komatsu and Sukegawa.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

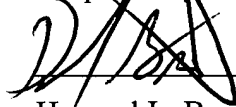
WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: October 4, 2004

Respectfully submitted,



Howard L. Bernstein  
Registration No. 25,665